

Abstract

The invention relates to a single screw extruder comprising a barrier screw and a barrel in which the barrier screw is held in a manner that permits to rotate and comprising at least one feed zone longitudinal section and at least one melting zone longitudinal section (23). The extruder (10) is characterized in that the barrel (11), on the inner wall (50) thereof in the area of the melting zone longitudinal section (23), has at least one groove (52) which runs in a longitudinal direction. The invention also relates to a method for extruding plastic material using a single screw extruder (10) comprising a barrier screw (40) which is held inside a cylinder (11) in a manner that permits it to rotate, whereby the extruder (10) comprises a feed zone (21, 22) and a melting zone (23), and the barrier screw (40) has at least one solid matter channel (49) and a melting channel (48). The method is characterized in that solid plastic material (solid matter) is transported in the area of the melting zone (23) in a defined quantity out of the solid matter channel (49) and into the melt channel (48).